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EXAMINER
LAMB, BRENDA A

ART UNIT	PAPER NUMBER
1734	

DATE MAILED: 01/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/709,119	TUDOR ET AL.	
	Examiner	Art Unit	
	Brenda A. Lamb	1734	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 October 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10,12-15,17-30,32-34 and 36-41* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10,12-15,17-30,32-34 and 36-41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-10,12-15,17-30,32-34,37-38 and 40-41 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The originally filed specification fails to teach or suggest the distance between the outlet ends of the dispersing chambers is approximately the same or less than the width of the sealing member.

The originally filed specification fails to teach or suggest the dispersing chamber is partially disposed outside the applicator plate and the term “outside the applicator plate” broadly reads the portion of the dispersing chamber partially disposed outside the applicator plate being arranged in a body other than the applicator body such as a dispersing chamber body which is attached to the applicator body and claim 1 is open to the applicator being comprised of multiple bodies with the term “comprising”.

Claims 38 and 41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The terms "said outlet ends" at line 1 of claim 38 and at line 1 of claim 41 lack proper antecedent basis.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1,6,8,10,17, 19-20,24,29-30, 36 and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Choi 5,891,482.

Choi teaches a multiple orifice applicator as shown in Figure 4 comprising: an applicator body having an inlet port 12; at least one dispersing chamber (elements 11 and 11') in fluid communication with the inlet port, each the dispersing chamber having an inlet and an outlet wherein a width for the dispersing chamber generally increases from the inlet to the outlet; and a detachable applicator plate assembly which includes element 32 having a plurality of outlet orifices in fluid communication with the at least one dispersing chamber (see column 5 lines 22-54), the at least one dispersing chamber is partially disposed within the applicator plate and partially disposed outside of the applicator plate. Choi multiple orifice applicator is capable of the end use of applying the fluid material to the workpiece since it teaches every claimed element of the apparatus. Note it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ 2d 1647 (1987). "[A]pparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). Thus Choi teaches every positively claimed element of the apparatus as set forth in claim 1. With respect to claim 10, Choi shows the at least one dispersing chamber having a terraced shoulderWith respect to claim 8, Choi shows in Figure 1 that the applicator includes two dispersing chambers. With respect to claim 36, Choi teaches the applicator plate assembly which includes

element 32 is coupled to the applicator body wherein a portion of the at least one dispersing chamber is disposed in the applicator body. With respect to claim 17, Choi teaches a multiple orifice applicator as shown in Figure 4 comprising: a source of fluid material which includes hopper 36; an applicator body having an inlet port 12; at least one dispersing chamber (elements 11 and 11') in fluid communication with the source of fluid material, each the dispersing chamber having an inlet and an outlet wherein a width for the dispersing chamber generally increases from the inlet to the outlet; and a detachable applicator plate assembly which includes element 32 having a plurality of outlet orifices in fluid communication with the at least one dispersing chamber (see column 5 lines 22-54), the at least one dispersing chamber is partially disposed within the applicator plate and partially disposed outside of the applicator plate. Choi shows in Figure 1 that applying a fluid material using an applicator to already formed layer of material, a workpiece, being conveyed by drum 8 thereby reading on applicant's mechanism for controlling relative positioning of the multiple orifice applicator and workpiece. . With respect to claims 6 and 18, Choi shows the applicator has a plurality of adjacent openings which are capable of dispensing a plurality of adjacent rows of material on the workpiece to create a band of material on the workpiece. With respect to claims 19-20, Choi shows in Figure 1 that the mechanism which causes the workpiece to move relative to the multiple orifice applicator. Choi teaches at column 3 lines 55-61 that mechanism which causes the workpiece to move relative to the multiple orifice applicator may include a conveyor belt. With respect to claim 24, Choi teaches the source of fluid material is a container (includes elements 3,4) located at a position

remote from the multiple orifice applicator and includes a fluid conduit 6 connects the container to the multiple orifice applicator. With respect to claim 30, the same rejection applied to claim 10 is applied here. With respect to claim 39, the same rejection applied to claim 36 is applied here.

Claims 3-5,9,32-34, 37 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi in view Ziecker et al.

Choi is applied for the reasons noted above. Choi fails to teach a seal is disposed about the dispersing chamber. However, Ziecker et al teaches arranging elastomeric seals about openings and between mated surfaces of an applicator in order to prevent leakage of fluid there between. Ziecker et al teaches arranging elastomeric seals in grooves within the mated surfaces. Therefore, it would have been obvious to modify the Choi apparatus such that an elastomeric seal is disposed about the dispersing chamber or dispersing chambers and arranged on the applicator plate which is mounted against the die body so as to provide a seal between the dispersing chambers since Ziecker et al arranging a seal between mating surfaces of an applicator having coating passages therein such as the applicator plate and die body of Choi for the taught advantage of doing so—prevent leakage of fluid there between. Further, it would have been obvious given the modifications of the Choi apparatus with Ziecker et al elastomeric seals to arrange the seals within grooves of the applicator/die body since Ziecker et al teaches arranging seals in grooves of the applicator for the obvious reason to stabilize the position of the seal. With respect to claims 37 and 40, it would have been obvious given the modifications of the Choi apparatus which has at least two dispersing

chambers to dispose the Ziecker et al sealing member in at least partially in a groove in the applicator body such that the sealing member extends at least between the dispersing chambers since Ziecker et al shows arranging a sealing member in a groove between mated surfaces of an applicator to prevent leakahe therein

Claims 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi in view Allen et al 5,061,170.

Choi is applied for the reasons noted above. Choi fails to teach a temperature-conditioning device comprises a temperature-conditioning device for temperature-conditioning the fluid material prior to the fluid material being dispensed from the multiple orifice applicator. However, Allen et al teaches an extrusion coating system wherein heat is added to the fluid material throughout its course of travel from the hopper to outlet connection to the extrusion die. Therefore, it would have been obvious to modify the Choi apparatus by providing a temperature-conditioning device for temperature-conditioning the fluid material prior to the fluid material being dispensed from the multiple orifice applicator since Allen et al teaches doing so for the obvious reason of greater control of the process. Thus claim 26 is obvious over the above cited references. With respect to claim 27, Allen et al temperature-conditioning of the fluid material may include a temperature exchanger means (column 6 lines 31-34). Allen et al teaches that the temperature conditioning includes a temperature exchanger positioned between the source of fluid material, hopper, and the extrusion die. Therefore, it would have been obvious to modify the Choi et al apparatus by providing the temperature exchanger means between the source of fluid material, hopper 3, and

the extrusion die 7 since Allen et al teaches doing so for the obvious advantage of greater control of the temperature of the fluid fed to the extrusion die. With respect to claim 25, Choi et al fails to teach the applicator system including a metering system in fluid communication with the fluid source and the multiple orifice applicator for metering desired volumes of the fluid material applicator. Allen et al teaches the applicator system including a metering system in fluid communication with the fluid source and the extrusion die or multiple orifice applicator for metering desired volumes of the fluid material applicator or extrusion die. Therefore it would have been obvious to modify the Choi et al applicator system by substituting its fluid material feeding means for its extrusion die/multiple orifice applicator with another fluid material feeding means for an extrusion means which includes a metering system in fluid communication with the fluid source and the extrusion die or multiple orifice applicator such as taught by Allen et al for the obvious advantage of greater control of the extrusion process.

Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi in view Bertolotti.

Choi is applied for the reasons noted above. Choi fails to teach each of the orifices includes a backing member having a chamfered inlet. However, it would have been obvious to modify the Choi apparatus by providing a backing member having a chamfered inlet such as shown by Bertolotti for the taught advantage of doing so – prevent the die orifices from plugging up. Thus claim 12 is obvious over the above cited references. With respect to claims 13-14, Bertolotti teaches that backing member may

be constructed from a fusible refractory or ceramic material which are well known to be abrasion resistant and a well known refractory ceramic materials include silicon carbide.

Claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi in view Adams et al 3,602,193.

Choi is applied for the reasons noted above. Choi fails to teach the mechanism for controlling the relative positioning of the applicator to the work piece. However, Adams et al teaches the design of a coating apparatus a substrate as shown in Figure 1, which is comprised of a source of fluid materials; a multiple orifice applicator in fluid communication with the source of fluid for dispensing filaments of a coating material on a moving substrate; and a mechanism for controlling relative positioning of the applicator to the work piece which obviously slides up and down on standard 38, thereby reading on a mechanical slide (see column 3, lines 63-70). Adams et al teaches the source of material for the adhesive applicator is located remote from the multiple orifice applicator and a fluid conduit, which connects the container to the multiple orifice applicator. Therefore, it would have been obvious to modify the Choi apparatus by providing a mechanism to move the applicator relative to the work piece using a mechanical slide since Adams et al shows mounting its applicator in such a manner for the obvious advantage of greater control of the coating process. Thus claims 21 and 22 are obvious over the above-cited references.

Claims 7 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi in view Hills.

Choi is applied for the reasons noted above. Choi fails to teach the orifices are arranged in at least two staggered rows. However, it would have been obvious to modify the arrangement of the orifices in the Choi filamentary applicator plate such that the orifices are arranged in at least two staggered rows since Hills teaches arranging the orifices in its filamentary plate are arranged in staggered rows for the taught advantage of increasing the fiber yield per surface area of the plate.

Claims 7 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi in view Kwok 5,902,540.

Choi is applied for the reasons noted above. Choi fails to teach the orifices are arranged in at least two staggered rows. However, it would have been obvious to modify the arrangement of the orifices in the Choi filamentary applicator plate such that the orifices are arranged in at least two staggered rows since Kwok teaches at column arranging the orifices in its filamentary plate are arranged in staggered rows for the obviously dependent on the manner of desired deposition on the substrate.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Choi in view Stash et al.

Choi is applied for the reasons noted above. Choi fails to teach an air source pressure to cause the fluid to flow from source of fluid to the multiple orifice applicator. However, it would have been obvious to modify Choi apparatus to provide a source of air pressure in communication with the source of fluid material to cause fluid to flow from the source of fluid to the means for coating the substrate/applicator since Stash et al teaches providing a source of air pressure in communication with the source of fluid

material to cause fluid to flow from the source of fluid to the means for coating the substrate for the obvious advantage of simplicity in design.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Choi in view of Wolf.

Choi is applied for the reasons noted above. Choi fails to teach an electronic motion controller that provides signals to the mechanism to control movement thereof. However, it would have been obvious given the modifications of the Choi applicator with the belt conveyor as the mechanism for controlling relative positioning of the applicator to the work piece to provide an electronic motion controller, speed sensor of the conveyor belt for carrying the workpiece, such as taught by Wolf (element 23 of Wofor the obvious advantage of using a electronic motion controller in combination with a conveyor belt for conveying substrate past an applicator – control of the weight per unit of the final product by controlling the movement of the workpiece past the applicator.

Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi in view of Krappweis.

Choi is applied for the reasons noted above. Choi teaches that the orifices in the applicator plate assembly may have different arrangements and different sizes. Choi fails to teach the orifices arranged in the manner such as set forth in claim 7. However, Krappweis teaches that his multiple orifice applicator which dispenses filaments of material onto a substrate. Krappweis shows the orifices of the filament dispensing applicator are arranged in two staggered rows which create a continuous band. Therefore, it would have been obvious to modify the arrangement of the orifices in the

Choi multiple orifice applicator such that it is within the scope since Krappweis teaches an arranging orifices in a multiple orifice filament applicator apparatus dependent on end use requirements of the applicator and especially since Choi teaches that the orifices in the applicator plate assembly may have different arrangements and different sizes obviously dependent on end use requirements of the apparatus.

Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to Brenda A. Lamb at telephone number (571) 272-1231. The examiner can normally be reached on Monday and Wednesday thru Friday with alternate Tuesdays off.

Brenda Adele Lamb

BRENDA A. LAMB
PRIMARY EXAMINER